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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,101	11/25/2003	Nobutaka Kitagawa	2102475-992011	1115
26379	7590	05/05/2004	EXAMINER	
GRAY CARY WARE & FREIDENRICH LLP 2000 UNIVERSITY AVENUE E. PALO ALTO, CA 94303-2248				NGUYEN, MINH T
ART UNIT		PAPER NUMBER		
		2816		

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/723,101	KITAGAWA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Minh Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-19 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 November 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/25/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____ .                                  |

## **DETAILED ACTION**

### ***Drawings***

1. Figures 19-21 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (note: compare Fig. 19 of the present invention with Fig. 2 of US Patent No. 6,570,402, cited in PTO 892). See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code, i.e., page 2, lines 17-18. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

### ***Claim Objections***

3. Claims 2 and 19 are objected to because of the following informalities:

In claim 2, line 5, “code flattening circuit” should be changed to -- code flattening section-- for consistency.

In claim 19, line 20, “as a clock signal” should be changed to -- using a clock signal --, line 32, “as the clock signal” should be changed to -- using the clock signal --, line 47, “register” should be changed to -- resistor --.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, the terms “first internal resistor”, “external resistor”, “second internal resistor” make the claim indefinite because “internal” and “external” are relative words, and it is unclear whether if these resistors are internal or external to which elements and/or circuit recited in the claim. The recitation “the first operational amplifier is also connected to the second series circuit” on lines 21-22 appears misdescriptive because as shown in Fig. 7 of the present invention, the first operational amplifier OP1 is not connected to the second series circuit, clarification is requested. The recitation an output of the code control circuit is inputted to the target impedance trimming resistor on the last two lines is unclear, i.e., the relationships between the recited output signal of the code control circuit, the switching codes, the impedance dummy resistor and the target impedance trimming resistor are unclear. The claim is further rejected because the relationship between the output terminal of the recited first operational amplifier and the recited first series circuit is unclear.

As per claims 2-18, these claims are rejected because of the indefiniteness of claim 1.

As per claim 12, the term “can be switched” recited on line 3 is unclear, i.e., it is unclear if the recitation means the resistance values of the first and second internal resistors are

interchanged, or it means the resistance values of the first and second internal resistors are changeable.

As per claim 13, the same problem exists as noted in claim 7.

As per claim 14, the term "the first resistor" lacks clear antecedent basis, i.e., it is unclear if there is a relationship between the "first and second resistance elements". Clarification is requested.

As per claim 15, the recited limitation "the external resistor is replaced with an internal resistor" is improper because it is not further limit the recited external resistor.

As per claim 19, the same problems exist as discussed in claim 1, and further, the recitation "the output terminal of the first operational amplifier is also connected to the second and third series circuits" on lines 36-38 appears misdescriptive because as shown in Fig. 29 of the present invention, the first operational amplifier OP1 is *not* connected to the second and third series circuits, clarification is requested. The relationships between the output dummy resistor and the first target impedance trimming resistor recited on lines 39-41 are unclear, the relationships between the input dummy resistor and the second target impedance trimming resistor recited on line 46-48 are unclear. The claim is further rejected because the relationship between the output terminal of the recited first operational amplifier and the recited second and third series circuits is unclear.

### ***Double Patenting***

5 A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v.*

*Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1 and 7-16 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-11, respectively, of copending Application No. 10/608,364. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

### ***Conclusion***

6. Claims 1-19 appears to read over the prior art of record due to the inclusion of the first operational amplifier recited in independent claims 1 and 19. However, due to the ambiguous structural relationship between the first operational amplifier and the rest of the elements in the circuit, patentability can not be positive determined in this Office action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 571-272-1748. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 4/26/04

Minh Nguyen  
Primary Examiner  
Art Unit 2816